原文題目(出處)：	Multiple calcifications within the parotid gland of patients with Sjogren's syndrome. Oral Sci Inter 2013;10:28-32.
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內文:

Abstract:
The purpose of this study was to investigate computed tomography (CT) and clinical features relating to calcifications within the parotid gland of patients with Sjogren's syndrome (SS).

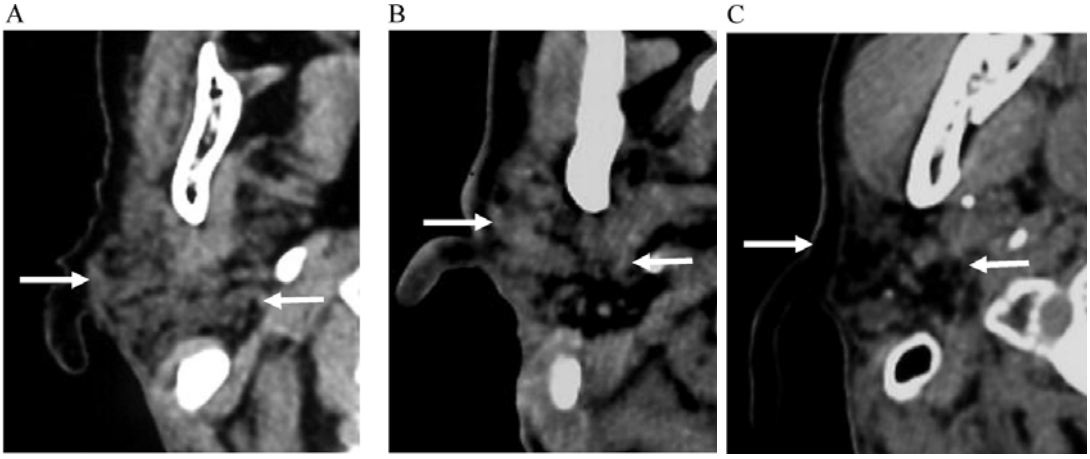
Introduction:

1. Sjogren's syndrome (SS) is a multi-system autoimmune disorder mainly targeting the salivary and lacrimal glands. Clinical symptoms are characterized by progressive dry mouth and dry eyes.
2. Bilateral and multiple small calcifications in the parotid parenchyma have been reported as a new feature of SS.
3. The occurrence of small calcifications was considered to be in the severely destructed parotid parenchyma of SS and to be extremely rare in the whole SS population.
4. Several imaging modalities, such as plain X-ray examination, sialography, ultrasound, and computed tomography (CT), are available for detection of calcifications.
5. CT is the most useful tool in detection and evaluation of small calcifications because of its high spatial resolution.

Patients and methods:

1.We surveyed patients with SS, who had been examined by CT, from a radiological information database accumulated from 2001 to 2011. Data from 38 patients with SS were extracted.
(8 patients were excluded because 5 had sialographic examination before CT examination, 3 patients had insufficient clinical information)
2. CT images were reread carefully to confirm the presence of calcifications in the parotid gland by three radiologists.
3. Clinical information was simultaneously investigated :medical records, letters of introduction from previous doctors, in particular past examinations for definite diagnosis of SS, complications of other autoimmune diseases, a history of parotid swelling, and/or saliva colic.
4. Of the remaining 30 patients, 14 (all female; age range 20–95 years; mean age 61.4 years) had calcifications in the parotid gland on CT images.
5. CT examination was performed with a single slice scanner (Somatom ART: Siemens Medical Systems, Erlangen, Germany), a 2-detector scanner (HiSpeed NX/I Pro: GE Yokogawa Medical Systems, Tokyo, Japan), or a 4-detector scanner (Asteion: Toshiba Medical Systems Corporation, Tokyo, Japan). Scan conditions were 120 kV and 100 mA.
6. Transverse images with 3 mm or 2 mm thickness were continuously acquired with

a scan direction parallel to the occlusal or mandibular plane.
7. CT images of 14 patients with calcifications were investigated for location, distribution, size, and shape of calcifications.
8. We presumed the destructed parotid parenchyma, which results from autoimmune reactions of SS, from the extent of fat deposition in the parotid gland.



Results:

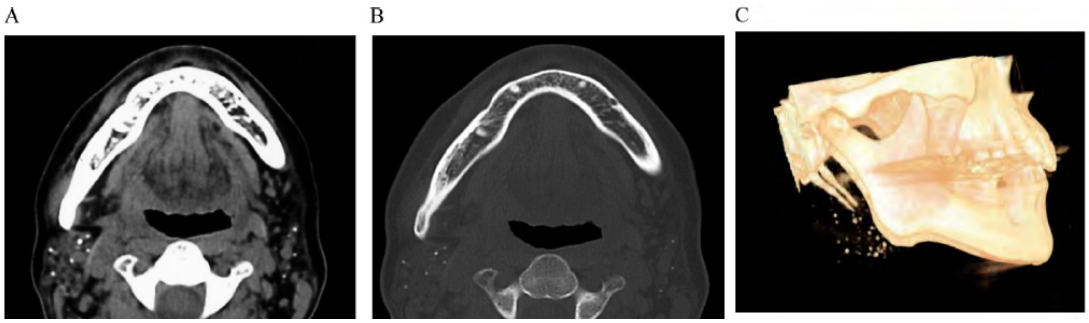
1. There were many characteristics differing from the typical features of sialoliths.(Table 1)

Table 1
Computed tomography findings and clinical features of 14 patients with Sjögren's syndrome.

Patient number	Age (years)	Calcifications				Severity of the destructed PG	History of PG swelling and/or complications pain	Complications
		Location	Distribution	Size	Shape			
1	91	Within Lt. PG	Multiple	<2 mm	Regular round	Moderate	–	–
2	62	Within Lt. PG	Multiple	<2 mm	Regular round	Slight	–	–
3	55	Within Bil. PG	Multiple	<2 mm	Regular round	Moderate	–	–
4	80	Within Bil. PG	Multiple	<2 mm	Regular round	Severe	–	RA
5	58	Within Bil. PG	Multiple	<2 mm	Regular round	Slight	–	–
6	20	Within Lt. PG	Multiple	<2 mm	Regular round	Slight	–	–
7	42	Within Rt. PG	Multiple	<2 mm	Regular round	Slight	–	–
8	68	Within Bil. PG	Multiple	<2 mm	Regular round	Slight	–	–
9	71	Within Bil. PG	Multiple	<2 mm	Regular round	Slight	+	–
10	41	Within Bil. PG	Multiple	<2 mm	Regular round	Slight	+	–
11	95	Within Lt. PG	Solitary	<2 mm	Regular round	Moderate	–	RA
12	40	Within Rt. PG	Solitary	<2 mm	Regular round	Moderate	–	–
13	55	Within Rt. PG	Solitary	<2 mm	Regular round	Slight	–	–
14	64	Within Rt. PG	Solitary	<2 mm	Regular round	Severe	+	–

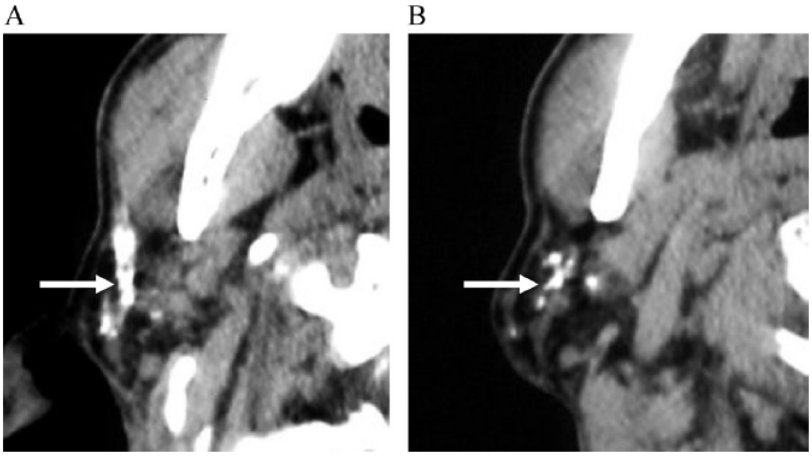
Rt, right; Lt, left; Bil, bilateral; PG, parotid gland; –, None; RA, rheumatoid arthritis.

2. -All calcifications (46%)were located within the parotid gland(not in the parotid duct)
-The size → not exceed 2 mm
-The shape →regular and round
-Multiple occurrences → in 10 patients, Bilateral occurrence → in 7 patients.
3. The relationship between the occurrence of calcifications and the severity of the destructed parotid parenchyma→slight destruction amounted to about 60%.
4. Few patients with a history of parotid swelling and/or saliva colic (21%, 3/14) and with complications of other autoimmune diseases (14%, 2/14).



Discussion:

1. The occurrence of calcifications in SS has been comparatively known as one of the extra-glandular manifestations.(nephrolithiasis and urolithiasis) Distal renal tubular acidosis is considered as a risk factor.
2. -The calcifications within the bilateral parotid gland of SS were not well known because of their rare occurrence.
-The incidence of our investigation, calcifications within the bilateral parotid gland appear to be a frequent occurrence (23%, 7/30)
-Sun et al. also reported that the incidence of calcifications within the bilateral parotid gland of SS was 29.4–35.2% in their CT investigation.
3. A reason for the contradiction between rare and frequent occurrence may be that CT examination is seldom done in patients with SS.(Most radiological examinations →scintigraphy and/or sialography.)
4. Although sialoliths are predominantly found in the duct, all calcifications in our cases were found within the gland.
5. Commonly, sialolithiasis presents with painful swelling (59%), painless swelling (29%), and pain only (12%). Clinical symptoms in our calcification cases were few (21%, 3/14).
6. The severity of the destructed parotid parenchyma was not related to the occurrence of calcifications in our SS series.
7. CT findings of these calcifications were very similar to the characteristics of angioliths in the parotid gland.
8. For the evaluation of calcifications on CT images, the history of sialographic examination should be noted.(Contrast medium, especially oleaginous, frequently remains in the duct system even in patients without SS.)



9. We do not negate a notion of previous reports that all calcifications in SS cases are sialoliths, because of no clear or enough evidence to negate this notion at present.
10. Limitations: a small number of cases, case bias, and non-analysis of the components of calcifications.

11. Further research by pathophysiological and biochemical approaches is expected.

題號	題目
1	Which statement is correct? (A) Sjogren's syndrome is an acute, systemic autoimmune disorder (B) Secondary Sjogren's syndrome means sicca syndrome alone (C) It is seen predominantly in male. (D) The basic microscopic findings is a lymphocytic infiltration of the salivary gland.
答案(D)	出處：Oral and Maxillofacial Pathology, 3rd edition, p.466,467
題號	題目
2	Which one is incorrect?
	(A) Sialoliths most often develop within the ductal system of the parotid gland.. (B) Major gland sialoliths most frequently cause episodic pain or swelling. (C) Sialoliths are usually solitary. (D) The calcification may be confused with an intrabony lesion on panoramic and periapical radiographs.
答案(A)	出處：Oral and Maxillofacial Pathology,3rd edition, p.459